

THE MINERAL INDUSTRY OF

ERITREA

By Philip M. Mobbs

Eritrea became an independent nation on May 24, 1993. The 125,000-square-kilometer country, bordering the Red Sea in northeast Africa, had an agriculture-based economy. The minerals industry was not yet a significant factor in the economy of Eritrea, however, the Government was making an effort to attract foreign investors and was especially interested in the potential enhancement that the mining and petroleum sectors could provide to the economy. To that end, several minerals-related laws have been issued since independence. A petroleum operations code was issued in July 1993; a general investment code was issued in 1994; and the Mining Proclamation No. 68/1995, the Mining Income Tax Proclamation No. 69/1995, and Regulations on Mining Operations Legal Notice 19/1995 were issued in March 1995. Royalties were 5% on precious metals and 3.5% on other minerals, the mining income tax rate was 38%, and there was no export tax on minerals.

The Geological Survey, within the Ministry of Energy, Mining and Water Resources' Department of Mines, had assembled and maintained a historical exploration and mining data base. The Ministry had defined prospect areas and awarded mineral property licenses in the central and northern regions to 6 of the 20 companies had reportedly applied for licenses during the First Round of licensing in September 1995 (Kensington Publications, 1996). Seven exploration and six prospecting licenses were assigned to the First Round license holders. Ashanti Goldfields Co. Ltd. of Ghana obtained licenses in the Ketina and the Medrezien areas; La Source of France secured the Adi Nefas concession; Pan African Resources Corp. of Canada acquired the Galla Valley license; Phelps Dodge Exploration Corp. of the United States gained exploration rights; Rift Resources Ltd. of Canada, through its Eritrean-Timmins Resource Ventures plc subsidiary, was exploring in the Ketina area and prospecting on the Nefasit-Mount Subul property; and WMC (Overseas) Pty. Ltd. of Australia received the exploration rights to properties in the Debub region and the Semenawi Keyih Bahri area. The Ministry planned a Second Round of licensing for early 1997 (Ministry of Energy, Mines and Water Resources, 1997).

Anadarko Petroleum Corp. of the United States was working on the Zula block offshore in the Red Sea. The Ministry was negotiating with other petroleum companies interested in exploring in Eritrea.

The country's mineral facilities included an 18,000-barrel-per-day petroleum refinery at Assab that was owned by the Eritrean Government and operated by Ethiopian Petroleum Corp. and a 45,000-metric-ton-per-year (t/yr) cement plant at Massawa, the country's main Red Sea port, with associated

quarries for limestone, clay or shale, and gypsum. The Orotta Iron and Steel Plant commissioned a 60,000-t/yr rolling mill during 1996 and was installing a 7,000-t/yr electric arc furnace. In addition, there were solar-evaporation sea salt plants near Massawa and Assab, each said to have capacities of more than 100,000 t/yr; quarries for dimension stone (granite and marble); and sources of silica sand and other raw materials for a 20-metric-ton-per-day glassworks in Asmara. Numerous artisanal gold workings were south and southwest of Asmara, and small quantities of lignite were mined at Adi Ugri, 50 kilometers (km) south of Asmara. The Government reported a 65% increase in gold production, to 98 kilograms (kg) compared with 59 kg in 1995.

Additional mineral occurrences having some potential for development included a beryl-bearing pegmatite at Shiliki, many primary gold deposits in quartz veins and schists of the Precambrian terranes west of Asmara, seven documented iron deposits east and south of Asmara, kaolin at several sites, and a nickel-chromite deposit in the northwest near the Sudanese border. Other mineral occurrences include petroleum along the mostly desert coastal plain and in the Dahlak Islands offshore of Massawa, potash in the Danakil Depression southeast of Asmara, and salt on the Dahlak Islands (Wegner and Häußer, 1996).

The nation's infrastructure, which suffered severe damage from the 30-year Ethiopian civil war that ended in 1991, was being rehabilitated with financial assistance from a number of countries in the European Union. Unexploded ordnance and land mines still litter the countryside. The 308-kilometer (km) railroad from Ak'orda through Asmara to Massawa was being rebuilt, only about 20 km of track inland from Massawa was operational. The ports at Assab and Massawa were being renovated.

Eritrea was suffering from a severe energy shortage. The nation had approximately 60-megawatts (MW) of electrical generating capacity, fueled by imported diesel. An 84-MW diesel powerplant was proposed for Hirgigo, near Massawa, and the installation of a 4-MW diesel-fueled generator was planned for Massawa. In 1996, the U.S. Geological Survey began an investigation of geothermal power southeast of Zula Bahir Selat'ē.

More exploration activity appeared to be likely as the Government authorizes additional mining and petroleum leases. The demand for construction and industrial materials is not expected to abate during this century, given the extensive rebuilding anticipated.

References Cited

- Kensington Publications, 1996, Meeting the energy crisis: Kensington Publications, United Kingdom [Accessed August 4, 1997, on the World Wide Web at URL <http://www.kenpubs.co.uk/worldstatesmen/Archive/Ghebreslasie.html>]
- Ministry of Energy, Mines and Water Resources, 1997, Mineral prospects of the State of Eritrea: Ministry of Energy, Mines and Water Resources, Asmara, Eritrea, February 6, 1997, 10 p.
- Wegner, Hans-Ulrich, and Häußler, Ilse, 1996, Eritrea: Hannover/Berlin, Bundesanstalt für Geowissenschaften und Rohstoffe, Rohstoffwirtschaftliche Länderberichte XL, 41 p. [In German.]

Major Source of Information

Ministry of Energy, Mining and Water Resources
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TABLE 1
ERITREA: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1992	1993	1994	1995	1996
Basalt	XX	XX	114,483	233,555	509,300
Cement	XX	XX	45,000 r/ e/	49,947 r/	47,031
Clays:					
Common	XX	XX	62,970	88,676	81,600
Kaolin	XX	XX	5,231	3,200 r/	2,620
Coral	XX	XX	74,404	78,603	69,269
Feldspar	XX	XX	6,823	--	--
Gold	XX	XX	78 kilograms	59	98
Granite	XX	XX	43,803	82,007	130,000
Gravel	XX	XX	80,622	1,172,500 r/	11,715
Gypsum	XX	XX	15	20	23
Lime	XX	XX	6,294	6,955	7,000 e/
Limestone e/	XX	XX	60,000 r/	70,000 r/	80,000
Marble 3/	XX	XX	190	292,400 r/	218,300
Pumice	XX	XX	183	233	300 e/
Quartz	XX	XX	488	276	870
Salt	XX	XX	207,836	254,700	200,412
Sand	XX	XX	464,883	911,508	1,000,000 e/
Silica sand	XX	XX	38,014	966,200 r/	1,481,100
Talc	XX	XX	3	--	--
Petroleum products	XX	XX	5,150 thousand 42-gallon barrels	4,336	4,500

e/ Estimated. r/ Revised. XX Not applicable.

1/ Includes data available through Aug. 6, 1997.

2/ Eritrea became independent in May 1993. Prior production reported under Ethiopia.

3/ In addition to tonnage listed in this table, 108,545 square meters of marble were produced for the construction industry in 1995.